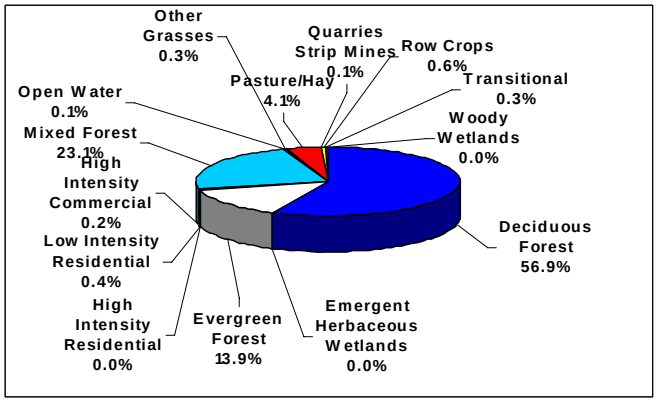
Summary – South Fork Cumberland River Watershed

In 1996, the Tennessee Department of Environment and Conservation Division of Water Pollution Control adopted a watershed approach to water quality. This approach is based on the idea that many water quality problems, like the accumulation of point and nonpoint pollutants, are best addressed at the watershed level. Focusing on the whole watershed helps reach the best balance among efforts to control point sources of pollution and polluted runoff as well as protect drinking water sources and sensitive natural resources such as wetlands. Tennessee has chosen to use the USGS 8-digit Hydrologic Unit Code (HUC-8) as the organizing unit.

The Watershed Approach recognizes awareness that restoring and maintaining our waters requires crossing traditional barriers (point *vs.* nonpoint sources of pollution) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials, and technical personnel all have opportunities to participate. The Watershed Approach provides the framework for a watershed-based and community-based approach to address water quality problems.

Chapter 1 of the South Fork Cumberland River Watershed Water Quality Management Plan discusses the Watershed Approach and emphasizes that the Watershed Approach is not a regulatory program or an EPA mandate; rather it is a decision-making process that reflects a common strategy for information collection and analysis as well as a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. Traditional activities like permitting, planning and monitoring are also coordinated in the Watershed Approach.

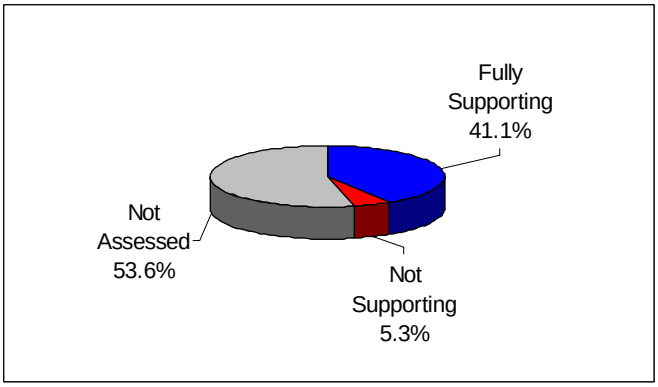
A detailed description of the watershed can be found in Chapter 2. The South Fork Cumberland River Watershed is approximately 1,365 square miles (976 mi^2 in Tennessee) and includes parts of six Tennessee counties. A part of the Cumberland River drainage basin, the watershed has 1,378 stream miles and 5 lake acres in Tennessee.



Land Use Distribution in the South Fork Cumberland River Watershed.

One national river and recreation area, four designated state natural areas, three state forests, one state park, and three wildlife management areas are located in the watershed. Eighty-eight rare plant and animal species have been documented in the watershed, including eight rare fish species, five rare mussel species, and three rare crustacean species. Portions of eight streams in the South Fork Cumberland River Watershed are listed in the National Rivers Inventory as having one or more outstanding natural or cultural values and a portion of the South Fork Cumberland River is designated as Outstanding National Resource Water.

A review of water quality sampling and assessment is presented in Chapter 3. Using the Watershed Approach to Water Quality, 303 sampling events occurred in the South Fork Cumberland River Watershed in 2000-2005. These were conducted at ambient, ecoregion or watershed monitoring sites. Monitoring results support the conclusion that 88.6% of stream miles and 100% of lake acres assessed fully support one or more designated uses.



Water Quality Assessment of Streams and Rivers in the South Fork Cumberland River Watershed. Assessment data are based on the 2004 Water Quality Assessment of 1,378 stream miles in the watershed.

Also in Chapter 3, a series of maps illustrate overall use support in the watershed, as well as use support for the individual uses of Fish and Aquatic Life Support, Recreation, Irrigation, and Livestock Watering and Wildlife. Another series of maps illustrate streams that are listed for impairment by specific causes (pollutants) such as pathogens, habitat alteration, and nutrient enrichment, and siltation.

Point and Nonpoint Sources are addressed in Chapter 4. Chapter 4 is organized by HUC-12 subwatersheds. Maps illustrating the locations of STORET monitoring sites and stream gauging stations are also presented in each subwatershed.

HUC-10	HUC-12
0513010401	051301040101 (New River)
	051301040102 (New River)
	051301040103 (Smokey Creek)
	051301040104 (New River)
	051301040105 (Buffalo Creek)
	051301040106 (New River)
	051301040107 (Brimstone Creek)
	051301040108 (New River)
0513010402	051301040201 (North Prong Clear Fork)
	051301040202 (South Prong Clear Fork)
	051301040203 (Upper Clear Fork)
	051301040204 Crooked Creek)
	051301040205 (Lower Clear Fork)
0513010403	051301040301 (Upper Whiteoak Creek)
	051301040302 (Camp Creek)
	051301040303 (Black Wolf Creek)
	051301040304 (Lower Whiteoak Creek)
0513010404	051301040401 (Big South Fork)
	051301040402 (Pine Creek)
	051301040403 (Station Camp Creek)
	051301040404 (Big South Fork)
	051301040405 (Bear Creek)
	051301040407 (Roaring Paunch Creek)
	051301040408 (Rock Creek)
0513010405	051301040501 (North Whiteoak Creek)
	051301040502 (Laurel Fork)
0513010407	051301040701 (Little South Fork)

The Tennessee Portion of the South Fork Cumberland River Watershed is Composed of twenty-seven USGS-Delineated Subwatersheds (12-Digit Subwatersheds).

Point source contributions to the Tennessee portion of the South Fork Cumberland River Watershed consist of seven individual NPDES-permitted facilities, three of which discharge into streams that have been listed on the 2004 303(d) list. Other point source permits in the watershed are Mining Permits (32), Tennessee Multi-Sector Permits (18), Aquatic Resource Alteration Permits (4), Ready Mix Concrete Plant Permits (2), and Concentrated Animal Feeding Operation Permits (2). Agricultural operations include cattle, chicken, hog, and sheep farming. Maps illustrating the locations of permit sites and tables summarizing livestock practices are presented in each subwatershed.

Chapter 5 is entitled *Water Quality Partnerships in the South Fork Cumberland River Watershed* and highlights partnerships between agencies and between agencies and landowners that are essential to success. Programs of federal agencies (Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service, and U.S. Army Corps of Engineers), and state agencies (TDEC/State Revolving Fund, TDEC Division of Water Supply, Tennessee Department of Agriculture, and Kentucky Division of Water) are summarized. Local initiatives of organizations active in the watershed (South Fork Watershed Association, Cumberland River Compact, Cumberland Mountain RC&D Council, The Nature Conservancy, and Hull-York Lakeland RC&D Council) are also described.

Point and Nonpoint source approaches to water quality problems in the South Fork Cumberland River Watershed are addressed in Chapter 6. Chapter 6 also includes comments received during public meetings, links to EPA-approved TMDLs in the watershed, and an assessment of needs for the watershed.

The full South Fork Cumberland River Watershed Water Quality Management Plan can be found at: http://www.state.tn.us/environment/wpc/watershed/wsmplans/